

# UNCLASSIFIED

AD NUMBER
AD035224
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; JAN 1954. Other requests shall be referred to Office of Naval Research, One Liberty Center, 875 North Randolph Street, Arlington, VA 22203-1995.
AUTHORITY
ONR Notice dtd 28 Aug 1970

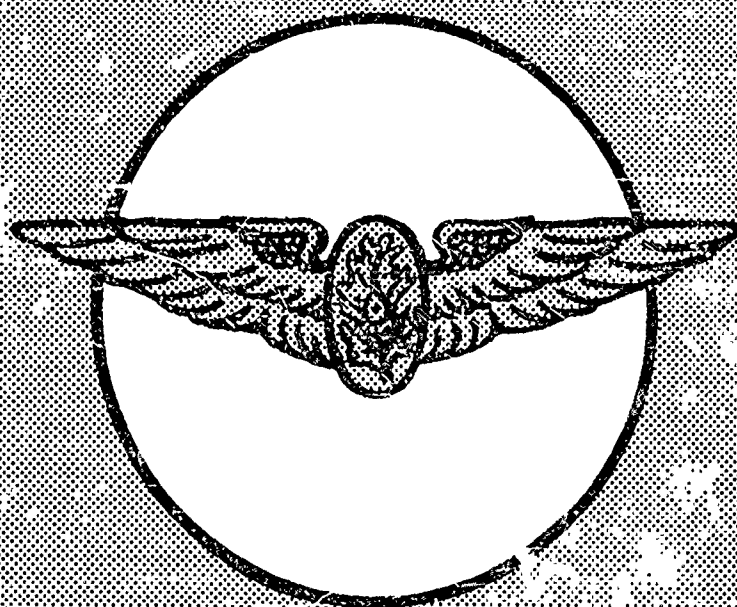
THIS PAGE IS UNCLASSIFIED

AD035224



LEADERSHIP, FOLLOWERSHIP AND FRIENDSHIP

PROJECT REPORT NO. NM 001 058.16.03



# RESEARCH REPORT

OF THE

U.S. NAVAL SCHOOL OF AVIATION MEDICINE

NAVAL AIR STATION

PENSACOLA FLORIDA

U. S. NAVAL SCHOOL OF AVIATION MEDICINE  
NAVAL AIR STATION  
PENSACOLA, FLORIDA

RESEARCH REPORT

LEADERSHIP, FOLLOWERSHIP AND FRIENDSHIP

REPORT NUMBER NM 001 058.16.03

Report by

Lieutenant (jg) Edwin P. Hollander, MSC, USN

and

Wilce B. Webb, ONR Contract No. NR 154-098

Approved by

Captain Ashton Graybiel, MC, USN  
Director of Research

Released by

Captain James L. Holland, MC, USN  
Commanding Officer

28 January 1954

Reference may be made to this report in the same way as to published articles noting authors, title, source, date, project number, and report number.

## SUMMARY AND IMPLICATIONS

There is a natural concern throughout the Navy with the identification and utilization of leadership qualities. This is a report on two problems related to leadership. First, how independent of personal friendship are estimates of leadership? Secondly, we wish to know the relationship between leadership characteristics and those characteristics which would make a man a good group member capable of following a leader. Are the qualities which make for good leadership compatible or incompatible with the qualities which constitute good followership?

The best available technique for the measurement of leadership qualities is the peer nomination method. Typically, each member of a group is asked to nominate the three members of his group whom he considers most capable of leadership and the three members whom he considers least capable of leadership. A man's "leadership score" is determined by the number of positive nominations from the group he obtains in contrast to negative nominations. Using this technique, estimates of individual leadership qualities were obtained in six sections of approximately 30 Naval Cadets each. A total of 187 leadership ratings were obtained. In addition, nominations were obtained for "high" and "low" followership capacity. Each member of the section was asked to assume he was a leader of a military mission and to nominate three members whom he would prefer as members of the group and the three he would least prefer. These were called followership ratings. Finally, each nominator listed his three best friends in the section.

The results of our analysis of the relationships among these measures yield certain clear-cut conclusions. Leadership estimates are to a considerable extent independent of friendship. In other words, the basis on which an individual nominates someone as being "high" or "low" on leadership is not necessarily determined by his friendship with the individual being rated. For example, 44% of the men listed as friends by the nominators were not nominated as one of the three "highest" on leadership.

In regard to followership, there was an extremely high relationship between the leadership nominations and the individuals chosen as good followers. If an individual was nominated as a leader by an individual, it was most likely that he would be nominated as one who was desired as a member or follower in the group. This is to say that those people whom people would choose to be their leader they would also choose to be followers if they themselves were leaders.

In regard to this latter finding, it appears that the man capable of being a leader is also considered capable of being a good group member or of following a leader. This makes sense in our present structured institution in which a man must not only lead his group but be capable of following directions from leaders higher in the hierarchy. This makes our task of selection more difficult in that you cannot assume that those who are not "high" on leadership will make good followers. However, our task is more clearly defined.

TECHNICAL

SUPPORTING

DATA .....

## INTRODUCTION

Of the various techniques which have emerged from recent social research, those founded in sociometric nominations or ratings have proved to be among the most useful. During the last years, several studies (1,2,3,7,8) have demonstrated the validity of such measures against various performance criteria. In a very tangible sense, this literature documents the effectiveness of group opinion in making predictions about individual group members, particularly with regard to leadership. Empirically, then, the techniques of evaluation by peers have gained substantial support.

This paper concerns itself with two problems of some import to the interpretation of peer nominations. One of these is the "followership" issue, that is, the interpretation which may be drawn from leadership nomination data with regard to characteristics of followership. A rather popular position considers that individuals nominated "low" or disregarded on leadership nominations constitute a followership group. This view rests on the assumption that leadership and followership fall at opposite poles of a status continuum. An alternative position, however, which makes no assumption, might hypothesize this "non-leader" group to be neither desirable as leaders nor desirable as followers. Thus, it is probable that within given institutional structures, leadership and followership qualities are interdependent. To determine whether this is true, insofar as peer nominations may reveal such relationships, is our first problem.

A second issue with which we are concerned is the lingering doubt that peer nominations represent much more than a "popularity contest." Here, the critic asks, in effect: are leadership nominations so much a function of "relevant" factors as they are a consequence of sheer popularity, i.e., considerations of friendship? At least one response to this question has been presented by Wherry and Fryer (7). Reporting on their research at the Signal Corps Officer Candidate School, they contend that peer ratings on leadership yield superior predictions of performance and hence constitute something beyond, or divorced from popularity as such. Their case is substantiated by analyses against criteria external to the ratings, with conclusions drawn inferentially from the obtained relationships. This is sound evidence, but only in one aspect. The fact remains that the qualities of popularity or friendliness determining ratings in one area may well be the common determinant of success in later performance. Complementary data drawn from a more direct approach to this question would appear to be required.

In this approach, we shall treat these problems of followership, leadership and friendship together for several reasons. First, there is the interest in any differential effect that friendship may play in leadership and followership choices. Second, and perhaps more critically, there is the realization that if a relationship were to be found between leadership and followership, it would be desirable to know the extent to which this was a function of common characteristics rather than merely a choice of friends for common roles. The ultimate aim is to provide a somewhat more complete view of the meaning of peer nominations.

## PROBLEM

Simply put, the purpose of the present study is to define more clearly the interrelationships among sociometrically derived measures of leadership, followership, and friendship. Two typical questions of a general nature to be studied are these:

1. In what way, and to what degree, is followership related to leadership?
2. In what way, and to what degree, is friendship related to leadership, and how does this compare with the relationship, if any, between friendship and followership?

## SUBJECTS AND PROCEDURE

The sample consisted of 187 Naval Aviation Cadets representing eight sections graduating from a 15 week pre-flight training course at Pensacola in the fall of 1953. The characteristic "OCS-type" regimen to which the cadets are exposed tends to bring about strong in-group affiliations within the sections. By the end of the pre-flight course, it is reasonable to expect that each of the cadets has had an opportunity to observe his section-mates under a variety of conditions. With regard to background, it might be noted too that all the cadets have had a minimum of two years of college or its equivalent and have a mean age slightly in excess of 21.

During its last week of training, each section was asked to complete three sociometric nomination forms; the first two of these were on leadership and followership, the third on friendship. In the case of the leadership and followership forms, the cadet was instructed on the sheet to assume that he was assigned to "a special military unit with an undisclosed mission." For leadership, he was asked to nominate in order three cadets from his section whom he considered best qualified ("high") to lead this special unit and three cadets from his section whom he considered least qualified ("low"). On the followership form, a similar set was presented with the instruction that the cadet assume that he himself had been assigned to the leadership of this special unit; from among his section-mates, he was asked to nominate three cadets whom he would want as part of his unit and three whom he would not want. Both forms stressed that cadets were to be selected in terms of the abilities which the nominator considered to be important for these roles. The third form solicited the names of three cadets whom the nominator considered to be his best friends, within his section.

Scores on the leadership and followership variables were derived by weighting positive nominations +3, +2, and +1, and negative nominations -1, -2, and -3. An algebraic summation of these weights was then divided by the potential number of nominators in the section, for any one man ( $N - 1$ ), thus yielding an index of a cadet's standing from +3 to -3 on both the leadership and followership continua. Friendship nominations were treated by a simple summation of a cadet's nominations divided by  $N - 1$ ; in this

instance, no signs were involved, since only positive nominations were obtained.

### ANALYSES AND RESULTS

The split-half reliabilities secured for the three scores, using odd-even nominators ( $N = 104$ ), were as follows: leadership, .94; followership, .91; friendship, .41. The  $r$ 's reported have been corrected by the Spearman-Brown prophecy formula.

The findings of correlational analysis are presented in Table I. The intercorrelations of the three sociometric variables will be seen to reach a significant confidence level, with the coefficient between leadership and followership ( $r = .92$ ) attaining the highest magnitude of the three. The correlation of .47 between leadership and friendship is in accord with relationships of a similar magnitude obtained between leadership and popularity in previous studies reviewed by Stogdill (6, p. 59). To determine the significance of the difference between the three combinations of paired correlations, the  $t$  test was applied. Computation of the standard error of the difference was accomplished through a technique suggested by Peatman (4, p. 420) which allows for dependent samples with one array in common. As indicated, all of these differences are significant beyond the .01 level, with the obtained magnitudes indicating that friendship contributes relatively less weight to leadership than it does to followership. A partial  $r$  calculated between leadership and followership, with friendship held constant, yields a coefficient of .90. The effect of friendship on the basic leadership-followership relationship appears to be negligible, therefore.

Since the nomination scores were group-derived, with weightings introduced which might serve to obscure personal interactions, two additional analyses were completed with direct utilization of individual choice-response patterns. These are summarized in Tables II and III. In Table II, consideration is given the disposition of a nominator's three "high" and three "low" leadership choices, so far as his nominations for followership are concerned. The analysis questions whether a nominator tends to choose his "high" leadership nominees as "high" on followership, and whether the reverse holds true as well. Reading across the top row, the mean in each cell represents the mean number of all the nominators' three "high" leadership choices who were chosen "high" or "low" or not mentioned on followership. The sum of these means across will equal 3.00. Consider, as an illustration, the first cell; the mean of 1.67 indicates that this number, out of three "high" leadership nominees, were nominated -- on the average -- as "high" on followership. An alternative way of viewing these data is in percentage form. In the first cell, then, 56% ( $1.67/3.00$ ) of nominations are represented. The bottom row presents the identical analysis for those nominated "low" on leadership. Here, as might be anticipated, the trend of mean size is reversed, reflecting the high correlations between leadership and followership.

An analysis similar to the previous one is presented in Table III. The focus of attention here is on the disposition of friends within leader-



ship and followership nomination categories. Specifically, consideration has been given to the mean number of the nominators' friends who are nominated, on the average, as "high" or "low" or not at all on leadership, in the top row, and on followership, in the bottom row. From the first two top cells it will be noted that, of the three friends, an average of .83 of them are nominated "high" on leadership while 2.11 of them are disregarded in these nominations. This stands in contrast to the adjacent bottom cells where means of 1.33 and 1.63 friends are nominated "high" on followership or disregarded. These means, of course, may be simply transformed to percentages as indicated for Table II. This over-all pattern highlights the fact that an average of more than two out of three friends are disregarded on leadership nominations; so far as followership nominations are concerned, no such marked tendency evidences itself. The t values computed vertically establish the significant differences in disposition of friends between leadership and followership nominations for the "high" or not mentioned categories.

### DISCUSSION

With respect to the fundamental questions underlying this investigation, the results indicate, first, that leadership and followership nominations are intimately related in a positive direction. The implication of this finding is that the more desired followers tend to be at the upper extremes of the leadership distribution; a corollary of this would be that those who are low or disregarded on leadership nomination are not viewed as desirable followers.

The second major finding is that leadership and followership nominations are, to a considerable extent, independent of the friendship choice of the nominators. This finding tends to substantiate the fact that peer nominations are not mere "popularity contests," but represent, at least for the variables of this study, evaluations of the individual's potential for performance independent of the dimension of friendship.

In discussion of the relatively high correspondence between leadership and followership, the crux of the matter lies, of course, in our definition of followership. The term may be broadly approached from the viewpoint of the leader or that of the led, i.e., the followers. In other words, the followers may be evaluated on their capacity as followers or their willingness to be followers. One may adopt either or both views. We have chosen to view followership as it is judged from the leadership standpoint. We have made this choice for two reasons: first, the reality of institutional demands and, second, the nature of the sociometric process and its established validity. A composite of followership nominations from potential leaders -- followership as viewed by all group members acting as a leader -- presents a reasonably satisfactory picture of this kind of followership. As it emerges here, then, our definition of followership is the extent to which an individual is desired by potential leaders of a group functioning within a circumscribed institutional context.

p

In keeping with this line of thinking, an additional analysis was conducted to determine whether individuals chosen "high" on leadership differed essentially in their choice of followers from individuals chosen "low" on leadership. By correlating the followership scores derived from nominations made by individuals in the top half of the leadership continuum with followership scores derived from nominations made by individuals in the lower half of the leadership continuum, it was found that the leadership status factor made little difference in the selection of followers; the correlation between the followership scores obtained independently from these two nominator groups was .82. Noting that the split-half reliability is a correlation between two sets of followership scores obtained independently of the leadership status of those making nominations, this  $r$  of .82 accords well with followership's uncorrected reliability of .83.

The finding that good leaders are also judged as good followers makes sense when viewed within an institutional framework like the military establishment. The principle represented applies as well to other institutions, however. With the increasing complexity of our society, the role of the institutional leader demands something more than leaping on a white charger to gallop off in a solely self-determined direction. Typically, he must effectively lead his group in directions which have been assigned to that group. Given this circumstance, the leader must himself be a good follower or his group may find itself destroyed or performing inefficiently in a total organizational mission. This point has been well elucidated in an industrial study of the first-line supervisor by Pelz (5).

At a theoretical level, the findings suggest one possible further dimension to the description of characteristics of a good leader, that is, good followership. While we have not defined such characteristics, it appears fruitful to consider the peer nomination technique as having utility in permitting their specification. Whatever use may be made of this added dimension, practically, it may profitably serve as an adjunct to leadership data where such techniques as peer nominations are aimed toward the fulfilling of institutionally prescribed leadership roles.

p

### BIBLIOGRAPHY

1. Anderhalter, O. F., Wilkins, W. L. and Rigby, M. K. Peer ratings. Technical Report No. 2. St. Louis: St. Louis University, 30 November 1952.
2. Hollander, E. P. Peer nominations on leadership as a predictor of the pass-fail criterion in Naval Air Training. J. appl. Psychol., (In press).
3. McClure, G. E., Tupes, E. C. and Dailey, J. T. Research on criteria of officer effectiveness. Res. bull. 51-8. Human Resources Research Center, Lackland Air Force Base, May 1951.
4. Peatman, J. G. Descriptive and sampling statistics. New York: Harper, 1947.
5. Pelz, D. C. Influence: a key to effective leadership in the first-line supervisor. Personnel, November 1952.
6. Stogdill, R. M. Personal factors associated with leadership: a survey of the literature. J. Psychol., 1948, 25, 35-71.
7. Wherry, R. J. and Fryer, D. H. Buddy ratings: popularity contest or leadership criterion? Personnel Psychol., 1949, 2, 147-159.
8. Williams, S. B. and Leavitt, H. J. Group opinion as a predictor of military leadership. J. consult. Psychol., 1947, 11, 283-291.

### ACKNOWLEDGEMENT

The authors wish to acknowledge their thanks to David J. Mitchell for his valuable assistance in the analysis of the data.

TABLE I  
INTERCORRELATIONS AMONG  
LEADERSHIP, FOLLOWERSHIP AND FRIENDSHIP SCORES

Correlated Variables	r*	P
Leadership vs. Followership	.92	< .001
Leadership vs. Friendship	.47	< .001
Followership vs. Friendship	.55	< .001

N = 187

\* A significance of differences beyond the 1% level between all combinations of these coefficients was obtained.

TABLE II  
MEAN FREQUENCY OF DISTRIBUTION  
OF HIGH AND LOW LEADERSHIP NOMINATIONS ON FOLLOWERSHIP

	Followership			
	High	Not Mentioned	Low	
Nominated High on Leadership	$\bar{X} = 1.67$ $\sigma = .75$	$\bar{X} = .131$ $\sigma = .74$	$\bar{X} = .02$ $\sigma = .12$	$\Sigma \bar{X} = 3.00$
Nominated Low on Leadership	$\bar{X} = 0$ $\sigma = 0$	$\bar{X} = 1.06$ $\sigma = .79$	$\bar{X} = 1.94$ $\sigma = .79$	$\Sigma \bar{X} = 3.00$

N = 187

TABLE III  
MEAN ASSIGNMENT OF LEADERSHIP  
AND FOLLOWERSHIP NOMINATIONS FOR THE THREE FRIENDS NOMINATED

	High	Not Mentioned	Low	
Leadership Nominations of three friends*	$\bar{X} = .83$ $\sigma = .81$	$\bar{X} = 2.11$ $\sigma = .71$	$\bar{X} = .06$ $\sigma = .24$	$\Sigma \bar{X} = 3.00$
Followership Nominations of three friends*	$\bar{X} = 1.33$ $\sigma = .73$	$\bar{X} = 1.63$ $\sigma = .73$	$\bar{X} = .04$ $\sigma = .18$	$\Sigma \bar{X} = 3.00$

$t = 6.25$   
 $P = < .001$

$t = 6.40$   
 $P < .001$

$t = .9$   
 $P > .05$

$N = 186$

\* Each S, acting as a nominator, names three friends. The top row examines the mean number of friendship nominees nominated as "high" on leadership, not mentioned, or nominated as "low" on leadership; the bottom row presents the same analysis for followership nominations.